DOCUMENT RESUME

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ABSTRACT

This Materials List is in three parts: (1) scrounge list, (2) free and inexpensive materials, and (3) supplies and materials to be purchased. This list is designed to help teachers in setting up classrooms for children based on the open approach to education. While many of the items included in Part 3 may impose too great a burden on budgets for Head Start, community action or day care center classrooms, they are included as useful reference materials for all teachers. (Author/CK)

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ED 060938

MATERIALS

EARLY CHILDHOOD EDUCATION STUDY

PS 005428

A USEFUL LIST OF CLASSROOM ITEMS THAT CAN BE SCROUNGED OR PURCHASED

ED 060938

This Materials List is in three parts:

I. Scrounge List

II. Free and Inexpensive Materials - grouped by classroom activity

III. Supplies and Materials to be purchased - prices and addresses of suppliers are included.

This List is designed to help teachers in setting up classrooms for children based on the open approach to education. While many of the items included in Part III may impose too great a burden on budgets for Head Start, community action or day care center classrooms, we include them here as useful reference materials for all teachers.

The Early Childhood Education Study acknowledges the work of the EDC Follow Through Project and of the National Association of Independent Schools in compiling this list.

We would welcome suggestions and additions to the Scrounge List, and hope you will share your ideas with us.

The Early Childhood Education Study is a project of the Education Development Center, and is supported by a grant from Project Head Start, Office of Child Development, Department of Health, Education and Welfare.

PS 005428

Early Childhood Education Study, EDC, 55 Chapel Street, Newton, Mass. 02160

(617) 969-7100

Cost: #.50

PART I. SCROUNGE LIST

This list contains some suggestions for materials available free from local merchants to use in classrooms. They represent only a sample of the many resources you will find in your area. Many of these materials are normally discarded; if you contact local businesses, shops or factories, and make your intentions known, they are quite often willing to save them for you.

Contractors and Building Supply Companies

lumber, pipes and wire, wallpaper, linoleum, tiles, molding wood, sawdust, wood curls.

You can make arrangements to go to a construction site when they are finishing a job; they will let you collect the scrap building materials.

Plastics Company

trimmings, cuttings, tubing, scrap plastic and plexiglass

Electronics Manufacturers

styrofoam packing, printed circut boards, discarded components

Lumber Supply Companies and Furniture Factories

scrap wood, damaged bricks, concrete blocks, doweling, sawdust, wood curls, wood scraps for carving

Hardware Stores

sample hardware books, sample tile charts, linoleum samples

Rug Companies

sample swatches, end pieces from rugs

Supermarkets and Outdoor Markets

cartons, packing materials, fruit crates, large cardboards and materials from displays, discarded cardboard display racks, styrofoam fruit trays

Department Stores

fabric swatches (drapery and upholstery samples), rug swatches, corrugated packing cardboard, sample food cans and boxes, packing boxes from appliances such as washing machines, refrigerators, etc.

Phone Company (call their Public Relations Department)

excess colored wires; telephones (on loan)

Electric Power Company (call their Public Relations Department)

telephone poles, wooden cross arms, steel ground rods, wire, large spools that can be used for tables, assorted packing materials

Garment Factories and Button Manufacturers

a great source for accumulating a wide variety of materials--yarn, buttons, scraps, decorative tape

Camera Manufacturers

cameras (on loan)

Leather Manufacturers and Leather Craft Companies
Pocketbook, Belt and Shoe Manufacturers

scrap pieces of leather and lacings

Billboard Companies

pieces of billboard to use as posters, wall coverings

Ice-Cream Stores

3-gallon ice cream containers

Airlines

plastic cups

Container Companies

large cardboard sheets

Architectural Firms, Upholsterers, Textile Companies, Floor Covering Firms, Kitchen Counter and Cabinet Makers, Wallpaper and Paint Stores

color samples; wood, linoleum and tile samples, formica squares, wallpaper books and scraps of all sizes

Bottling Firms

bottle caps, large cardboard tubes

Window, Storm Door and Siding Companies; Soft Drink Manufacturers

aluminum scraps

Cleaners and Tailors

buttons, hangers, scrap material

Restaurant

ice cream containers, corks, boxes and cartons

Large Food, Candy and Soap Manufacturers

sample cans and boxes

Plumbers and Plumbing Supply Companies

wires, pipes, tile scraps, linoleum

Tile and Ceramics Companies

scraps of ceramic and mosaic tile; tile by the pound (inexpensive)

Paper Companies

unusual kinds of paper are often available free in the form of samples, end cuts, or damaged sheets. Paper is delivered to paper companies in large cardboard tubes which are usually discarded. These make good chairs, tables, cubbies, etc. (See Building with Tubes, a publication of the Early Childhood Education Study.)

Metal Spinning Companies

shavings and scrap pieces

Junk Yard and Scrap Metal Yards

unlimited possibilities! Wheels of all shapes and sizes, all kinds of gears and moving parts from clocks, radios, fans, cars, irons, toasters, etc. Handles from doors, cars; knobs; broomsticks; hinges and fittings.

Note: Be on the lookout for packing materials wherever you go. Depending on the nature of the factory or business, they come in an infinite variety of materials, shapes and sizes.

II. FREE AND INEXPENSIVE MATERIALS

Construction, Sewing, and Woodworking

1. Boxes of all kinds - egg cartons, milk cartons, cookie trays, vegetable cartons and trays, match boxes
2. Plastic bottles, boxes and jugs - bleach bottles, ice cream cartons, detergent bottles, cheese containers, margarine containers
3. Cardboard tubing from toilet paper, paper towels, wrapping paper
4. Broom handles, spools, bottle caps, lids, pipe cleaners, elastic bands
5. Elmer's glue, paste, Scotch tape, masking tape, paper clips, staples, string, rope, wire, brass paper fasteners
6. Wallpaper, swatches of rug and drapery material, tiles, linoleum
7. Scrap metal and pipe, wheels
8. Gears from clocks, radios, fans, cars, irons, toasters; handles, knobs, hinges and fittings of all kinds
9. Scrap wood, fruit crates, large cartons, barrels
10. Nuts, bolts, nails, washers, screws
11. Cloth - various textures and colors: silk, lace, organdy, net, nylon, wool, corduroy, wool, velvet, burlap, felt, cotton, taffeta
12. Yarn, ribbon, rick-rack, fringing, decorative tape, lace edging, thread, embroidery floss
13. Buttons, beads, sequins, buckles, snaps, zippers
14. Needles, pins, knitting needles

Playgrounds

1. Large cartons, fruit crates, barrels
2. Concrete blocks, bricks, large stones
3. Large spools from telephone wire - check phone company
4. Ladders, sewage pipes, ropes
5. Bicycle tires, automobile tires, saw horses, tree trunks, planks
6. Targets painted on boards or on the concrete
7. Wooden structure for a clubhouse

House Corner, Dramatic Play, Shops

1. Old dresses, paints, shirts, blouses
2. Hats: men's women's, cowboy, baseball, baker, bride's veil, crowns, helmets
3. Shoes: ladies' heels, boots, slippers, men's shoes and sandals, etc.
4. Shawls, coats, capes, scarves
5. Beads, earrings, bracelets, pins, belts
6. Material to use as saris, turbans, trains, capes
7. Fans, glasses, gloves, handbags, wallets, aprons
8. White coats for doctors, nurses, bakers, etc.
9. Hand mirror, compacts, long mirror, clothes rack, coat hangers
10. Old televisions, radios, record players, irons, toasters
11. Old dolls, doll's clothes and furniture, stuffed toys
12. Telephone - perhaps from phone company
13. Brooms, dust pans, brushes
14. Tub for washing clothes, soap powder
15. Fruit and vegetable crates, saw horses, baskets, grocery carts, shopping bags
16. Play money or units for exchanging - pegs, golf tees, popsicle sticks, etc.

Sand and Water

1. Plastic jugs, bottles, cups, etc. - all in varying sizes
2. Old teapots, coffee pots, watering cans, garden hoses
3. Bottles, jars with lids, tin cans
4. Wood, cork, stones, shells, sponges, styrofoam, marbles
5. Rubber balls, balloons, bubble pipes
6. Hand towels, mops, aprons
7. Food coloring, soap, flour, string, wire, rubber bands

Wet Sand

8. Wood, stones, bricks, planks, twigs
9. Shovels, spoons, pails, scoops, rakes
10. Molds, muffin tins, cake tins, paper cups, shells, tin cans, plastic boxes, jars, jugs

Dry Sand

11. Dust pans, brushes, brooms
12. Sugar, salt, coffee, tea, spices, seeds
13. Bags - paper and plastic
14. Straws
15. Cone-shaped paper cups
16. String
17. Net material
18. Cornstarch

(Materials may be interchanged in 3 categories above)

Balancing

1. Plastic containers for storage - labeled
2. Spoons, scoops, funnels, sieves
3. String, wire, paper plates, paper cups, paper paint buckets, paper clips, plasticine, nails, cup hooks
4. Milk cartons, baby food jars, juice cans, plastic bags, paper bags
5. Materials for weighing and balancing:-- spools, bottle caps, clothes, pins, stones, shells, buttons, styrofoam, sponge rubber, corks, blocks, washers, nuts and bolts, rubber balls; rice flour, sugar noodles, coffee, tea, bran, kidney beans, dried peas, nuts, chestnuts, pine cones, sawdust; soap flakes, small cans of food, rolls of life savers, sugar cubes (for making weights), packages made up to exact weights

Math

1. Materials for counting, sorting, grouping, ordering, and pattern making:-- shells, stones, golf tees, marbles, tooth picks, straws, washers, bottle caps, buttons, beads and lacing, spools, pipe cleaners, lengths of ribbon, colored sticks, popsicle sticks, cancelled stamps; string, rope, hoops for enclosures
2. Playing cards, dominoes, checkers, dice
3. Old clocks, egg timers, stop watches, wrist watches, metronome, cash register, scales, adding machines
4. Curtain rod with hooks
5. Calendars, train, bus and plane schedules, maps
6. Tape measure, yard sticks, rulers, canes, doweling, unmarked wood, lengths of ribbon and string, straws, paper streamers

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Free and Inexpensive - Art Materials

Collage Tray

1. Yarn, thread, ribbon, lace, stones, shells, bottle caps, broom straws, straws, toothpicks, pipe cleaners, twigs
2. Materials - all varieties
3. Scrap paper - all varieties
4. Wood chips, feathers, sawdust, sand, macaroni, rice, excelsior, packing paper, beads, sequins, buttons, foam rubber, cork, scrap rubber
5. Seaweed, leaves, pine needles, seed, wax, chalk, wire, string

Painting

6. Muffin tins, empty plastic squeeze bottles, jars with lids, tin cans
7. Sheets of plastic, newspaper, apron
8. Sponges, string, rope, clothesline and pins for hanging papers
9. Straws, sticks, twigs, toothpicks to be used as brushes, paper towels

Graphics

10. Tin cans, cardboard tubing, rolling pins, pencils, hair curlers, candles to be used as rollers in printing
11. Paper towels - folded to make print pads
12. Objects for printing:-- forks, spoons, potato mashers, buttons, corks, jar lids, blocks, clay, corrugated board, vegetables, rubber bands, paper clips, string, and material

Clay Work

13. Plastic bags and covered tins for storage
14. Plastic material
15. Tools for modeling - pencils, feathers, twigs, forks, knives, spoons, rolling pins, pebbles, shells, leaves, toothpicks

Sculpture

16. Scrap wood and cardboard
17. String, wire, nails
18. Toothpicks, pipe cleaners, straws
19. Sticks
20. Cardboard, tin foil
21. Assorted paper
22. Elmer's glue

PART III. SUPPLIES TO BE PURCHASED

All prices shown below are 1969 prices and may have already changed. Orders for the following school year should be placed by April 15, and you should be sure to emphasize your requirements for delivery by June 15.

ITEM	CATALOG REFERENCE	SUPPLIER	COST
Special Equipment (Note: Items may be shared by several classrooms)			
1. Newcomb monophonic portable phonograph	EDT-20	Newcomb Audio Products	$ 79.95
2. Wollensak Tape Recorder	1520	Wollensak 3M Company	184.95
3. Wollensak Listening Center	for 8 headphones	"	14.00
4. Wollensak Headphones		"	51.80
5. Language Master Unit		Bell & Howell	250.00
6. Headphones	#36407	"	28.00/set
7. Dual Headphone Adaptor	#40720	"	3.75
8. Blank Card Set 4"x14"	072481	"	9.50/100
9. Blank Card Set 3 1/2"x9"	072475	"	6.00/100
10. Small electric stove for cooking			
11. Small kiln for pottery			

Tri-Wall Cardboard

Available from Tri-Wall Corporation directly; price does not include freight

42" x 54"	(20-99 boards)	$2.41 ea
42" x 54"	(100 and over	1.34 ea
4' x 5'	(100 and over)	1.69 ea
4' x 6'	(100 and over)	2.06 ea
4' x 8'	(100 and over)	2.86 ea

In the Greater Boston/New England area, you may pick up small quantities of Tri-Wall at the Workshop for Learning Things, EDC, 55 Chapel Street, Newton. No delivery. Maximum order 30 boards.

42" x 54"	$2.10 ea
4' x 6'	2.95 ea
4' x 8'	4.10 ea

Tri-Wall prices listed above are as of November 1, 1970

ART MATERIALS

A wide variety of papers of all sorts and sizes is essential.
A wide variety of sizes in brushes is essential. Especially important are large brushes for painting.

Papers

1.	White Drawing Paper Vellum 18x24		Hammett	$7.80
2.	Easel Newsprint 18x24		"	4.40
3.	Black Manila Drawing Paper 18x24		"	10.00/ream
4.	Bogus Drawing Paper 18x24		"	4.00
5.	Easy Glide Finger Paint Paper		"	1.70
6.	Ruffmeal Drawing Paper 18x24		"	4.00
7.	Crystal Craft Tissue 29 colors 15x20		"	1.00
8.	Construction Paper 9x12, 18x24, 24x36 packages of assorted colors			
9.	Project Roll Dispenser 36"	#10203	Hammett	8.00
10.	Project Roll	6200	"	1.75

Paint and Brushes

11.	Dry Powder Paint Basic colors: red, black, yellow, white, blue Others added as budget allows		Hammett	1.00/lb can
	OR			
	Dry Powder Paint in primary colors		Hammett	

Brushes

12.	Long Handled Easel Brushes		Hammett	
13.	Flat and Round Brushes - 1/2", 3/4", 1"			

Chalks and Markers

14.	Binney & Smith Colored Chalk		Hammett	3.96/144 sticks
	Small sticks - assorted colors	91212	"	
15.	Sanford Deluxe Magic Markers	23206	"	5.38
	Set of 8 colors			
	Sharpie Fine Line Marker Pen		Hammett	.49
16.	Red	23101		
17.	Blue	23102		
18.	Green	23103		
19.	Yellow	23104		
20.	Orange	23105		
21.	Brown	23106		
22.	Purple	23107		
23.	Black	23100		

Art Materials (continued

Clays

24.	Plasticine - 10 assorted colors	#76500	Hammett	
	Any low-firing natural clay available locally (must have a kiln available)			

Miscellaneous

25.	Scissors - 5" clip point	#21101	Hammett	.47
26.	Elmer's Glue - gallon	21911	"	6.00
27.	1" Masking Tape	24423	"	.76
28.	2" Masking Tape	24424	"	1.54
29.	Scotch Magic Mending Tape 3/4"	24425	"	1.21
30.	Swingline Stapler	20903	"	6.95
31.	#24 bare copper wire (1 lb)	65-835	Cambosco	2.50
32	Craft-stix (popsicle sticks)		Constructive Play.	1.20/1000
	Plaster of paris - 20 lbs - buy locally			
	Matt knives			
	Water based printing inks in assorted colors			
	Scrap linoleum and scrap pine for block printing			
	Assortment of gouges and knives for carving blocks--Hammett			
	Brayers			
	Glass or masonite to roll ink on			

MUSIC

Order all instruments from Magnamusic - Baton, 6394 Delmar Boulevard, St. Louis, Missouri

Note: The following represent a complete ensemble of tuned and untuned percussion which could be shared by several classes. If each classroom bought one item of tuned percussion and one or two of untuned, these could be amalgamated. If only one or two items of tuned percussion are purchased, the starred items would be most useful, as they fall into the range of the child's voice. If three or more are purchased, one from each section would be useful, but of a different timbre; i.e., do not select all metallophones or all xylophones, etc.

Tuned Percussion - all with suitable beaters

1. Bass metallophone	BMd	Carl Orff		$172.00
2. Bass xylophone	BXd	"	"	156.00
3. Alto metallophone	AMd	"	"	57.60
4. Alto xylophone **	AXd	"	"	53.60
5. Alto glockenspiel **	ACd	"	"	20.80
6. Soprano metallophone	SMd	"	"	42.40
7. Soprano xylophone	SXd/a	"	"	46.80
8. Soprano glockenspiel	SGd/D	"	"	24.60

Other Percussion Instruments (as many as possible to be purchased)

Standing drums with soft beaters			
9. 12"	P30		29.60
10. 14"	P35		34.40
11. 16"	P40		39.20
12. 2 Tambourines 10"	RST25		11.90 ea.
13. 2 Tambours 12"	RST30		13.60 ea.
14. 2 Pairs Cymbals 10"	C25		15.20 ea.
15. 1 Snare Drum and Sticks	KT30K		38.00
16. 4 Triangles (largest size)	T30		5.80 ea.
17. 4 Pairs Castanets with handles	KS1		4.70 ea.

Wind Instruments

18. 6 plastic soprano Recorders			3.25 ea.

WOODWORKING

1.	Woodwork Bench	H306DC	Hammett	$ 46.50

Real Tools, Not Toys - purchase from local supplier

2. 4 small Claw Hammers
3. 1 Crosscut Saw
4. 2 Keyhole Saws
5. 2 Small Screw Drivers
6. Screw Driver Electrical
7. 2 Pliers
8. 2 Coping Saws

9. Wire
10. Wire Cutter
11. Sand Paper
12. Doweling - varying widths
    (wooden squares and circles for nuts)
    (threading kit)

13. Paint
14. Turpentine
15. Shellac
16. Brushes

17. Wood
18. Pegboard
19. Springs
20. Hinges, knobs, nails, screws, nuts, bolts
21. Large metal pulleys, various sizes
22. Rope, nylon cording

MATHEMATICS

Construction

1.	Skribble stix	11600	Milton Bradley	$ 5.00
2.	X blocks	ESA 7363/001	SEE	25.00 **
3.	H blocks	ESA 7362/005	"	21.60 **
4.	Lock-a-blocks	Galt N-1305	"	2.50 **
5.	Cu-bricks	8M-115	Childcraft	3.95
6.	Prism blocks	8M-325	"	8.00
7.	System One	8M-327	"	10.00
8.	Flexagons	DQ116	Creative Playthings	5.95
9.	Geo. strips	INV 141	SEE	8.00

Mosaics

10.	Pattern blocks	PBCK01	SEE	9.00
11.	Geometric Rubber Mosaic Tiles	DJ115	Creative Playthings	5.00
12.	Basic shape sets	INV 140	SEE	5.00
13.	Polymosaic	77067	Hammett	2.59

Continued.....

MATHEMATICS (Continued)

Mosaics

14.	Plastic Mosaic Shapes	ESA007	SEE	$ 7.75
15.	Mosaic shapes 9" set	ESA7557/027	"	1.50 **
16.	Scope		Economy 5 & 10	5.00
17.	Halsam Play tiles		Hammett	2.50
18.	Ornabo	ESA008	SEE	15.00
19.	Playskool Color Cubes	302	Constructive Playthings	2.00

Structured Materials

20.	Poleidoblocks Set G	ESA021	SEE	20.00
21.	Geo-blocks	17523	McGraw-Hill	29.50
22.	Grouping set	T110	Taskmaster	15.00 **
23.	Unifix cubes	TN42-23	Constructive Playthings	2.45 Box of 50
24.	Unifix 100 track	TN42-31	" "	4.50
25.	Unifix 100 trays	TN42-30	" "	1.50
26.	" " "	TN42-16	" "	2.15
27.	Unifix plastic markers	TN42-6	" "	2.95
28.	Cuisenaire rods	CG-1E	Cuisenaire Company	6.95
29.	Cubical counting cubes	8039	Hammett	4.00/100
30.	Attribute blocks	AGCK00	SEE	8.60
31.	Mirror cards	18418	McGraw-Hill	10.80
32.	Dienes Logical blocks	Z80007	Herder & Herder	19.50
33.	Rubber Pegboards	DN113	Creative Playthings	.65
34.	Pegs	DN115	" "	.80/100
35.	Rubber bands	BAND01	SEE	.30
36.	Multi-mat Square sum		"	7.25
37.	Multi-mat All squares		"	7.25
38.	Shapes Board	T107/3	Taskmaster	3.00 **
39.	Circle Board	T105/2	"	2.40 **

Counting, Sorting, Matching, Ordering, Grouping, Sharing, etc.

40.	Miniature toys by lb.	DB-103	Creative Playthings	5.95
41.	Miniature cars		Buy Locally	
42.	Miniature animals		Buy locally	
43.	Golf tees		Buy locally	
44.	Beads	470	Milton Bradley	1.75
45.	Bead Laces	471	" "	.70 doz.
46.	Counting sticks	64041	Hammett	1.30
47.	Colored Plastic Washers	PRM006	SEE	20.00 6 gross in 6 colors 3.50 gross in 1 color
48.	Counting Chips	PRM008		1.75/200 in 8 colors
49.	Assorted Porcelain Tiles	77122	Hammett	1.50

** These items are from British suppliers and the prices are estimated

MATHEMATICS (Continued)

Puzzles and games locally available, chess, checkers, etc.

50. Tangrams Pieces (ESS)	17446	McGraw-Hill	$ 2.40
51. Tangrams Cards (ESS)	17445	" "	4.20
52. Set of 12 Tangrams (fit ESS cards)	SEE004	SEE	4.00
53. Set of 12 Tangrams (different pieces)	ESA024	"	4.00

CONSTRUCTION

Note: We suggest

(a) that some items be ordered from each of the groups

(b) that any central store set up should carry examples of all items listed.

Junior Engineer	ESA 7453/029	SEE	18.00 **
Giant Engineer Construction Kit	ESA 9884/408	"	38.00 **
Mechanical Building Set		EDC Workshop Store	97.93
Fischer Technik 200	DT751	Creative Playthings	14.95
Play panels	8M383	Childcraft	4.95
Clink-a-Links	8M324	"	4.00
Playplax rings and squares		Economy 5 & 10	9.95
Octons	GALT L540	SEE	4.50 **
Hex-upon		Economy 5 & 10	7.95
Rising Towers	DR255	Creative Playthings	3.00
Ji-gan-tiks	8M310	Childcraft	2.98
Top towers	8M399	"	3.00
Join-Ems	8M116	"	3.95
Snapsticks	8M284	"	4.95
Connector	8M118	"	12.00
Big Boy Tinkertoy	84465	Hammett	5.50
Rig-a-Jig	DT662	Creative Playthings	4.00
Constructo-straws	60563	Hammett	2.00
Geo-D-stix	8M332	Childcraft	4.95
Lego #74	DT666	Creative Playthings	10.95
Minibrix	GALT N-1060	SEE	7.60 **

** These items are from British suppliers and the prices are estimated

SCIENCE

Electricity

Pkg. of 48 Batteries	BATT48	SEE	$ 8.60
			17.00/2
100' #20 bare copper wire	BBCK01	"	1.25
GE #48 bulbs	BBCK08	"	4.50/25
			14.50/100
Bub holders	BBCK10	"	2.25/10
			13.00/60
Large rubber bands (battery holders)	BBCK14	"	.65/40
Wire Cutters	BBCK16	"	1.25
			1.10 ea/7 or more
Pkg. of 8 spools assorted wires	BB0807	"	11.75
Electrostatics materials	64-208	Cambosco	3.75

Magnetism (* indicates a particularly powerful magnet)

Magnastiks	8M289	Childcraft	7.95
Magnastiks	KR613	Creative Playthings	7.95
Magnetic Needle	Z-4100	LaPine	1.90
Magnetic Compass	59-229	Cambosco	.53
Iron Filings	59-178	"	.63/lb
Encased Iron Filings	DS-741	Creative Playthings	.79
Small Steel Balls	59-173	Cambosco	.38/100
Magnetic Balls	60,508	Edmund	1.00
Flexible Magnetic Strip	60,092	"	1.25
Flexible Magnetic Cord	40,875	"	2.50/10'
Rubberized rect. magnets w/center hole	BBCK18	SEE	.10 ea
			7.00/100
Assorted Rubber Magnets	1804	Welch	2.50
Ceramic ring magnets (12)	8P307	Childcraft	1.95
* 1½ lb. Horseshoe magnet	60,215	Edmund	5.75
* Ring magnet (5'dia.)	60,578	"	5.00
Lodestone	Z-3950	LaPine	.35
Alnico bar magnet	Z-4260	"	1.80
Alnico horseshoe magnet 3/4' across poles	219-11A	"	1.00
" " " 1-3/16" " "	219-11B	"	1.50
* " " " 1-5/8 " " "	219-11C	"	2.40
* Cylindrical magnets 6 x 50 mm.	Z-4200	"	1.40/pr
" " 10 x 127 mm	60,131	Edmund	3.00/pr
" " 21 x 16 mm.	60,577	"	2.00/10
* Disc magnets (polarized along dia.)	40,419	"	2.00/pr
" " (" " ")			
(with center hole)	60,433	"	1.00/pr
Small ceramic disc magnets (½" dia.)	40,820	"	1.00/25
Ceramic rect. magnets w/center hole	40,637	"	1.00/10
Ceramic ring magnets	40,869	"	1.00/4
* Ring gap magnets	40,964	"	2.35/4
* U magnets (1-11/16" across poles)	40,951	"	2.15/4
* U magnets (1- 1/16" " ")	40,909	"	2.00/10

SCIENCE (Continued)

Magnetism (Continued)

* Alnico U Magnet (1-5/8" across poles)	59-63	Cambosco		$ 3.45
* Rectangular magnets (1-1/8 x 3/4 x ½")	40,906	Edmund		2.10/8
* Ceramic rect. magnets (1-7/8 x 7/8 x 3/8")	40,818	Edmund		1.40/pr

Optics

Polarizing sheets 6" x 6"	60,637	Edmund	2.50/4
Mounted Polarizing Filters 4" x 4"	40,991	"	4.00
Lenticular screens kit	60,589	"	2.00
Moire Patterns Color Kit-Series A	60,530	"	12.50
Color Filters 5" x 8"(44 diff.clrs)	60,403	"	8.00
Colored cellophane rolls	(see under Art & Craft; p.2, item 10)		
Telescope & Mount	60,735	Edmund	13.75
Color Paddles (red, blue, yellow)	INV353	SEE	1.00
Magic Reflector (kaleidoscope)	DJ010	Creative Playthings	5.95
Hand Stroboscope	3742	Welch	2.25
Big i Little i	DS050	Creative Playthings	5.95
Small Stand Magnifier	DS170	" "	3.50
Giant Magnifier on Stand	DS374	" "	9.95
Small Cylindrical Magnifier	79-35C	Cambosco	1.95
Reading glass	40,027	Edmund	2.25
" " plastic lens	60,635	"	1.00
1" Hand Lenses	MGBK03	SEE	1.00/10
Microscope	SEES00	"	3.25
" (same)with illuminator	SEES01	"	4.25
Micro Bio Chamber Microscope	73-301	Cambosco	8.75
Mirror Cloth (specify #1 Clear Mirror; also size of mirrors & size of cloth desired)			
½" x ½" mirrors		National Products	2.30/sq ft
½" x 1" mirrors		" "	2.00/sq ft
1" x 1" mirrors		" "	2.00/sq ft
Plastic Mirror (specify 1/8" thick and desired dimensions)		Parallel Mfg. Corp.	4.00/sq ft
Metal Mirror 4" x 6" -- See end of Optics section)			
Plastic Mirrors 2½ x 3½	MIRROR	"	1.25/3 .40 ea/10 or more
Round Flexible Mirror	DJ319	Creative Playthings	3.75
Paddle Mirrors and Standing Mirror	DS053	" "	11.50
One-way glass mirror 5 x 15 cm.	57-226	Cambosco	1.20
Concave-Convex metal mirror (75 mm dia.)	Z-4550	LaPine	1.40
Concave-Convex Cylindrical metal mirror (2" x 4")	Z-4555	"	1.55
Concave-Convex Cylindrical metal mirror (1" x 6")	57-244-1	Cambosco	1.00
Perspex (plastic) Prisms (set of 7)	INV680	SEE	17.75
Refraction plate	Z-3100	LaPine	1.25
Flat equilateral prism	Z-5060	"	1.40

SCIENCE (Continued)

Optics (continued)

Flat right angle prism	Z-5070	LaPine	$ 2.00
Right angle prism (75 x 25 mm)	Z-5080	"	2.25
Equilateral prism (75 x 25 mm)	Z-5050	"	1.75
" " (153 x 30 mm)	DS764	Creative Playthings	2.00
Refraction cube	57-315	Cambosco	3.85
Amici Roof Prism	3002	Edmund	1.50
Penta Prism	40,622	"	6.50
Metal Mirror 4" x 6"	PBCK02	SEE	.80
		1.50 pr; .70 ea/10 or more	
Magnifier 4X	MAG04X	"	3.25
Magnifier 8X	MAG08X	"	3.25

Mechanics/Dynamics

Swinger (5 suspended steel balls)	SEE003	SEE	8.00
Assorted springs	(local hardware store)		
Spiral Wave Motion Spring	55-116	Cambosco	4.95
Gyroscope	GYR001	SEE	.75
Turntable bearing mount	40,602	Edmund	1.50
Single Pulley	Z-5200	LaPine	.90
Double "	Z-5210	"	1.20
Triple "	Z-5220	"	1.55
Quadruple "	Z-5230	"	1.85
Double Tandem Pulley	Z-5240	"	2.10
Triple " "	Z-5250	"	2.70
Linen Pulley Cord	43-472	Cambosco	.85/25yds
Styrofoam Balls			
3/4" dia.	39-110-1	Cambosco	1.80/12doz
1" "	39-110-2	"	2.88/12doz
2" "	39-110-4	"	2.76/4doz
3" "	39-110-6	"	4.50/3doz

Sand and Water Play

Sand and Water Play Table	A64	Community Playthings	49.50
Aluminum Liquid Measures Set	DJ070	Creative Playthings	9.50
Medicine Droppers	KPST12	SEE	.50 doz
Plastic Measuring Cups 1 & 2 cup	Buy locally		
Food Coloring	" "		
Polyethylene Sheeting (6' wide)		Roy Edwards, Inc.	10/80/100' roll
Syringe 20 cc	GAOT11	SEE	.35
Syringe 30 cc	GAST10	"	.40
Syringe 50 cc	GACT00	"	.60
Alumninum Sifters and Cans	DP233	Creative Playthings	4.75
Paddle Boat	DR035	" "	3.00
Sand Machine	DB632	" "	8.00
Plastic funnel 35 mm	25-465-1	Cambosco	.31

SCIENCE (Continued

Sand and Water Play (Continued)

Plastic Funnel 55 mm	25-465-2	Cambosco	$ .36
" " 75 mm	25-465-4	"	.58
" " 100 mm	25-465-6	"	.91
" " 160 mm	25-465-7	"	1.90
Plastic Filtering Flask 500ml	25-280	"	1.95
Plastic Erlenmeyer Flask500ml	25-270-2	"	2.00
Plastic tubes (6' long x 1-1/8" dia)	GAST03	SEE	.35
			.30 ea/10 or more
Caps for above (min. order 10)	GAST03	"	.03 ea/25 or more
Plastic tubes (6' long x 5/8" dia)	GAST05	"	.25
			.20 ea/10 or more
Caps for above (min. order 10)	GAST06	"	.04 ea
			.03 ea/25 or more
Clear Plastic Tubing (specify ¼" I.D.)	2080	Greene Rubber Co.	.14 ft (min.order 50 ft)
Plastic bottle w/hole in bottom	KPS007	SEE	.35
Set of 5 caps with different size holes for above	KPS008	"	.50/set
Assorted taper corks	23-15-3	Cambosco	5.00/100

Miscellaneous

Thermometer	SEETOO	SEE	.60
Fulham Balance	DA383	Creative Playthings	12.50
Equal Arm Balance (from ESS Kitchen Physics)	KP0604	SEE	1.85

DRAMATIC PLAY

Good suggestions for classrooms - probably not necessary for teachers' workshop.

Collect wooden boxes and crates out of which to make housekeeping corner furniture.

A set of Dishes

1.	Buy locally: cups & saucers - set of 6: plates - set of 6: silverware, 6 knives, forks, spoons, pots and pans			
2.	Puppets - Felt Animal Puppets - set of 6 - F.P. 600 Constructive Playthings			$ 7.50
3.	Rubber Hand Puppets - family 5 (white)	7D145	Child Craft	14.50
4.	" 5 (black)	7D146	" "	14.50
5.	Wooden Figures - set of 13 farm animals	2001	Constructive Play	2.00
6.	set of farm family	2002		2.00
7.	Dress-up Clothes (see list of free and inexpensive materials)			
8.	Bendable rubber family dolls (white)	DB292	Creative Playthings	8.95
9.	" " " " (black)	DB492	" "	8.95

LIST OF SUPPLIERS

Alexander Steel Equipment Corp.
101 River Street
Waltham, Massachusetts 01254

Bell & Howell Company
Audio-Visual Products Division
7100 McCormick Road
Chicago, Illinois 60645

Cambosco Scientific Co.
342 Western Avenue
Boston, Mass. 02135

Childcraft Equipment Co., Inc.
40 Forest Street
Lexington, Mass. 02173
or
155 East 23rd St.
New York, New York 10010

Community Playthings
Rifton, New York

Constructive Playthings
1040 East 85 St.
Kansas City, Mo. 64131

Creative Playthings, Inc.
Princeton, New Jersey 08540

Cuisenaire Company of America, Inc.
12 Church St.
New Rochelle, New York 10805

Economy 5 & 10
1730 Massachusetts Avenue
Cambridge, Mass. 02138

EDC Workshop Store
55 Chapel Street
Newton, Mass. 02160

Edmund Scientific Co.
100 Edscorp Building
Barrington, New Jersey 08007

Roy S. Edwards Inc.
29 Crafts St.
Newton, Mass. 02158

E.S.R., Inc.
34 Label St.
Montclair, New Jersey 07042

Greene Rubber Co., Inc.
160 Second St.
Cambridge, Mass. 02142

J. L. Hammet Co.
Hammett Place, 195 Pearl St.
Boston, Mass. 02184
OR
2393 Vauxhall Road
Union, New Jersey 07083

Herder & Herder
232 Madison Ave.
New York, New York 10016

LaPine Scientific Co.
375 Chestnut St.
Norwood, New Jersey 07648

W. C. Long Co.
P.O. Box 311
Chatsworth, Georgia

Magnamusic - Baton
6394 Delmar Boulevard
St. Louis, Mo. 63130

McGraw-Hill Book Co.
Webster Division
Manchester Road
Manchester, Missouri 63011

Milton Bradley Co.
P.O. Box 1581
Springfield, Mass. 01101

Nasco Scientific Co.
Fort Atkinson, Wisconsin 53538

National Products Inc.
c/o Paul B. Segal
33 Bartlett Road
Randolph, Mass.

Newcomb Audio Products Co.
12881 Bradley Ave.
Sylmar, California 91342

Parallel Manufacturing Co.
32 East 10 St.
New York, New York 10003

Parker Brothers
190 Bridge St.
Salem, Mass.

SEE (Selective Educational Equipment Inc.)
3 Bridge Street
Newton, Mass. 02195

SUPPLIERS (continued)

Taskmaster Ltd.
165-167 Clarendon Park Road
Leicester, ENGLAND

Tri-Wall Containers, Inc.
Educational Materials & Services
One duPont Street
Plainview, New York 11803

Tri-State Plastic Molding Co.
Box 337
Henderson, Kentucky

Welch Scientific Co.
7300 North Linder Avenue
Skokie, Illinois 60076

Wollensak 3M Company
3M Center
St. Paul, Minnesota 55101